

Enhancement of Blended Learning Materials and Methodologies to Promote Inclusivity

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SUMMARY

Students with learning special educational needs, difficulties, and disabilities can represent a significant proportion of the overall students in higher education. Difficulties and needs such as dyslexia, dyscalculia, dyspraxia, dysgraphia, ADHD, and colour blindness can often face barriers to their education. The Covid pandemic changed the way that education was undertaken overnight, resulting in acceleration of digital and blended learning methodologies, but this haste for development may have led to less emphasis being made on inclusivity for all end users.

To help promote inclusivity a group consisting of students from various levels, disability officers from the students union, learning and teaching specialists, and technical and academic colleagues were assembled. Initially, the team examined the accessibility of existing materials and methodologies for teaching and were asked to provide feedback through a structured questionnaire to obtain an initial benchmark based on:

- Clarity of Instruction,
- Ease of use for materials,
- Level of accessibility,
- Level of interaction from materials,
- Overall satisfaction.

Based on the resulted of the structured questionnaire the team investigated each of the questions and outlined barriers to learning students may have from the material to these aspects. Key themes were

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established and enhancements on materials were made ensuring, multiple colour schemes, digital options for all material, with capabilities for audible reading, accessibility across multiple viewing platforms, and implementation range of learning methodologies and technologies. These technologies included the use of digital interactive learning materials, virtual reality simulations, interactive quizzes, presentations, practical work, and paper based simulated exercises to help create a diverse learning environment.

After new materials were developed based on the above feedback, the team once again examined the materials and completed the same structured questionnaire to gauge improvement of the materials within the key themes outlined above and were materials and methodologies implemented into a level 4 surveying class. To help with the overall success of the material, after implementation feedback was sought by the larger cohort of students within the class to review the overall efficacy of the materials and teaching from an inclusivity perspective.

The author noted an increase in interaction with the students during in-person taught sessions and an increase in engagement from the students while implementing new technologies. Feedback sought from the students was generally positive and showed an improvement in overall inclusivity and highlighted appreciation from students for this. However, comments were also made on how further improvement could be made on inclusivity by looking into some of the less common learning difficulties and examining how material could be further developed for these students.